

IN THE SPECIFICATION

Please amend the written specification as follows wherein added text is indicated with underlining and deleted text is marked with ~~striketrough~~ or [[double brackets]]:

Please amend the paragraph from line 1 to 24 on page 5 as follows:

Referring again to figure 1, the broadcast streamer 114 may then transmit the interactive stream 120 to a set of hardware 122. Hardware 122 may comprise standard satellite system technology. The hardware 122 may receive the interactive stream 120 and transmit the interactive stream 120 to a satellite transmission station 124, which in turn may transmit the interactive stream 120 to a satellite 126 orbiting the earth. The satellite 126 may then beam the interactive stream 120 to the user's home 128. The embodiment of figure 1 may further comprise an OpenTV application (software application 131), located on a set-top box 130, that may read the interactive stream 120 and display interactive stream 120 to a user on the user's display device 132. The embodiment illustrated in figure 1 may also include a computer 134 located in the uplink facility 104 that is used to monitor the function of the application streamer 109. Of course, computer 134 may comprise multiple computers in uplink facility 104. The computers 134 may monitor, configure, and make any necessary changes to the application streamer 109. The computers 134 may have a graphical user interface (GUI) 136 installed that implements methods of monitoring the application streamer 109. GUI 136 is described in more detail below with regard to the description of figure 5. The computers 134 may be coupled to the application streamer 109 via a network connection 137 such as an Ethernet ~~ethernet~~ connection. The computers 134 may utilize a distributed component object model (DCOM) user interface 138. DCOM 138 is a windows programming standard that allows the computers 134 to be run from any location within the uplink facility 104 and to connect to any number of application streamers 109. The application streamer 109 may also monitor the connection to the broadcast streamer 114, the connection to the FTP server 102, the status of the interactive stream 120, and may query the FTP server 102 for new data received from content provider 100.

Please amend the paragraph from line 6 to 23 on page 7 as follows:

Figure 2 is a flow diagram illustrating the steps 200 carried out by the embodiment of figure 1. Referring to figure 2, textual and graphical information may be retrieved by the application streamer 109 in step 202. The textual information may comprise XML data and the graphical information may comprise JPEG/BMP data. The process proceeds to step 204, where the application streamer 109 converts XML data into OpenTV formatted files and converts JPEG/BMP data into MPEG formatted files. Conversion of XML data into OpenTV data and JPEG/BMP data into MPEG data is discussed in more detail with regard to the description of figure 3. The application streamer 109 then creates nodes, which map to each file, on the broadcast streamer 114. "Nodes" may comprise interactive blocks of data that are streamed out of the uplink facility 104 along with a regular satellite broadcast stream 118. Turning again to figure 2, the process then proceeds to step 206 where MPEG nodes and text nodes (OpenTV nodes) are multiplexed into the regular broadcast stream 118 by the broadcast streamer 114. The process then proceeds to step 208 where the resulting interactive stream 120 is sent from the uplink center 104 to software application 131 (OpenTV application) on a user's set-top box 130 in the user's home 128. When the user selects additional information, the set-top box software application 131 may extract the additional information from the interactive broadcast stream 120.

Please amend the paragraph from line 24 on page 7 to line 13 on page 8 as follows:

Figure 3 is a flow diagram illustrating the steps 300 performed by an application streamer in preparing data received from a content provider for viewing on the display device 132. Referring to figure 3, the application streamer 109 may retrieve textual and graphical data from a content provider 100 in step 302. The data provided by the content provider 100 may comprise textual and graphical information. As previously discussed with regard to the description of figure 2, the textual data may comprise additional textual information, such as biographical information about a movie actor, information about the creation of a movie, or other information.

The textual data may comprise any format, including XML format. ~~Conversely, graphical~~ Graphical information supplied by content provider 100 may comprise any graphical information, including movie posters, box covers, actor pictures, etc. The graphical information may comprise any format, including JPEG and BMP format. The content provider 100 may send the textual and graphical data to a FTP server 102 over the Internet 101. The connection 103 between content provider 100 and the FTP server 102 may comprise an Ethernet ~~ethernet~~ connection, a network connection, or any other high-speed connection. The application streamer 109 may process the textual and graphical data in such a way that the textual and graphical data may be presented to a user in an interactive fashion. Presenting the textual and graphical data in an interactive fashion may comprise converting the textual and graphical data into OpenTV (interactive) data. Software application 131 located on set-top box 130 may process the OpenTV data. The software application 131 may comprise OpenTV software. The OpenTV data may then be presented by display device 132.

Please amend the paragraph from line 14 to 28 on page 8 as follows:

Turning again to figure 3, the process proceeds to step 304 where textual data, which may be in the form of XML code, is parsed by the application streamer 109. The XML data may comprise textual information and references to pictures. The XML data may also comprise data that provides instruction to the application streamer 109 as to which files are to be converted to MPEG files ~~[[MPEGs]]~~. The process then continues to step 306, where application streamer 109 may convert the XML data into an OpenTV formatted file. Conversion of XML data to OpenTV data may be achieved using existing technology. Conversion of XML data to OpenTV data may comprise parsing the XML code to create textual code modules (textual code files). At the same time, the graphical data may be converted into an MPEG formatted file. The MPEG formatted file may comprise an MPEG "still" (a still-picture such as a movie shot, movie poster, actor picture, etc). Conversion of JPEG and BMP files into MPEG files may be achieved by using standard "off-the-shelf" technology, such as an OpenTV product called "OTVFrame".

Conversely, other standard graphical programs may be used to convert JPEG and BMP files into MPEG files, such as Photoshop.

Please amend the paragraph from line 19 on page 15 to line 13 on page 16 as follows:

Figure 5 is an illustration of a graphical user interface (GUI) 500 that is used to create nodes. As shown in figure 5, GUI 500 may display graphics nodes 501. Text nodes are not shown in this illustration. Referring to figure 5, names of graphics nodes 501 may appear in text box 502. GUI 500 may be located on computers 134. GUI 500 may comprise status buttons that monitor the embodiment of figure 1. Turning to figure 5, the "Broadcast Streamer" "~~broadcast streamer~~" status button 504 may indicate status (functionality) of the broadcast streamer 114. The "Nodes" "~~nodes~~" status button 506 may indicate status of nodes (whether or not the nodes are streaming properly). If the nodes are streaming successfully, a green light may illuminate the nodes status button 506. If nodes are dysfunctional and/or are not streaming properly, a red light may illuminate the nodes status button 506, and an error message may appear in log window 508. Log window 508 may indicate status of node creation system by displaying error messages. Looking again to figure 5, the "XML files" status button 510 may indicate the status of the FTP connection and the status of the XML files. The "Raw Files" "~~raw files~~" status button 512 may indicate the status of successful transfer from XML file to a raw file. Raw files may comprise the extracted data from the XML files. The raw files may then be converted to compiled files. "Compiled Files" "~~compiled files~~" status button 514 may indicate whether the step of converting raw files to compiled files has been completed successfully. Compiled files may comprise MPEG-stills and OpenTV resource modules. Compiled files may then be converted into spool files. Spool files may comprise a file structure used to create nodes. Referring again to figure 5, the "Spool Files" "~~spool files~~" status button 516 may indicate whether the nodes have been created successfully. Simple network management protocol (SNMP) traps may be used to monitor the system/network. SNMP is a protocol used to manage networks. Within SNMP protocol, messages may be sent to the network, and agents (SNMP-compliant devices) may

return data about the agents to the SNMP sender. In short, SNMP traps report that a device is functioning properly.

Please amend the paragraph from line 14 on page 16 to line 2 on page 17 as follows:

Turning again to figure 5, GUI 500 may also comprise buttons along the right hand side of GUI 500. The "Create Base Nodes" ~~"create base nodes"~~ button 518 may be activated after the spool files have been created. "Create base nodes" button 518 may be manually activated. The embodiment of figure 5 may use automated methods to create nodes. However, the embodiment of figure 5 also provides for manual creation of nodes. Referring again to figure 5, the "Set Node Parameter" ~~"set node parameter"~~ status button 520 may allow an author (person monitoring computers 134) to set node parameters such as date of node creation, maximum size of node, name of node, or other node parameters. The "Load Node Data" ~~"load node data"~~ button 522 may then be activated to indicate the particular broadcast stream in which the nodes are to be inserted. Multiple broadcast streamers 114 may exist within an uplink facility 104. There may also be multiple application streamers 109 within an uplink facility 104. Conversely, one application streamer 109 may be linked to multiple broadcast streamers 114. Furthermore, each broadcast streamer 114 may receive multiple regular broadcast streams 118. Therefore each node must be designated to a particular broadcast stream 118. Looking again to figure 5, the "Refresh" ~~"refresh"~~ button 524 may simply refresh the computer 134 screen. The "Stop All" ~~"stop all"~~ button 526 may be activated by the author if a warning message appears in log window 508 or a red light illuminates one of the status buttons at the top of the GUI 500. The "Stop All" ~~"stop all"~~ button 526 may stop all node insertion into the broadcast stream 118. The "Play All" ~~"play all"~~ button 528 may be activated by the author to resume node insertion into the broadcast stream 118.

Please amend the paragraph from line 3 to 11 on page 17 as follows:

Looking again to figure 5, GUI 500 may comprise tabs located at the top GUI 500. Such tabs may comprise an "About" ~~"about"~~ tab 530 that gives information about the application streamer 109. "Broadcast Streamer" ~~"broadcast streamer"~~ tab 532 may comprise user name and password requirements as well as unique broadcast streamer addresses to create a connection to a particular broadcast streamer 114. The "Application Streamer" ~~"application streamer"~~ tab 534 may comprise information about application streamer 109. Referring again to figure 5, the "Nodes" ~~"nodes"~~ tab 536 is currently activated to display graphics nodes 501. The "Data Loader" ~~"data loader"~~ tab 538 may contain a field that indicates the frequency at which the application streamer 109 queries the FTP 102 server for new data.